On page 181, line 21, please delete "Taq" and replace with --*Taq*--.

On page 182, line 1, please delete "enzyme Cleavase™ BN and Taq" and insert --Cleavase™ BN enzyme and *Taq*--.

On page 182, lines 5, 24 and 25-26, please delete "enzyme Cleavase™ BN" and insert --Cleavase™ BN enzyme--.

On page 185, line 25, please delete "enzyme Cleavase™ BN" and insert --Cleavase™ BN enzyme--.

On page 187, lines 8-9, please delete "enzyme Cleavase™ BN" and insert --Cleavase™ BN enzyme--.

On page 189, line 16, after "BN", please insert --enzyme--.

On page 200, lines 6 and 10, after "BN", please insert --enzyme--.

On page 267, line 17, please delete "M. tuberculosis" and insert --*M. tuberculosis*--.

On page 303, line 16, please delete "H2O" and insert --H_2O--.

IN THE CLAIMS:

Please cancel Claims 2 and 30 without prejudice as to their renewal.

Please amend the following claims:

1. (Amended) A method [for identifying strains of microorganisms], comprising:

a) providing:

i) [a] an enzymatic cleavage means; [and]

ii) a nucleic acid substrate containing sequences derived from one or more microorganism; and

iii) control cleavage products produced by cleavage of a reference sequence derived from a microorganism;

b) treating said nucleic acid substrate under conditions such that said substrate forms one or more cleavage structures; [and]

c) reacting said cleavage means with said cleavage structures so that one or more test cleavage products are produced[.] ; and

d) comparing said test cleavage products to said control cleavage products.

~~3~~ 6. (Amended) The method of Claim[2] 1, wherein said [enzyme] enzymatic cleavage means is a nuclease.

~~4~~ 7. (Amended) The method of Claim ~~3~~ 6, wherein said nuclease is selected from the group consisting of ~~Cleavase™~~ BN nuclease, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

19. (Amended) A method for treating nucleic acid [detecting and identifying strains of microorganisms], comprising:

a) extracting nucleic acid from a sample suspected ~~of~~ containing one or more microorganisms; and

b) contacting said ~~extracted~~ nucleic acid with [a] an enzymatic cleavage means under conditions such that said extracted nucleic acid forms one or more secondary structures, and said cleavage means cleaves said secondary structures to produce [one or more] a plurality of cleavage products.

~~31~~ 32. (Amended) The method of Claim [30] ~~19~~ 18, wherein said [enzyme] enzymatic cleavage means is a nuclease.

~~32~~ 33. (Amended) The method of Claim ~~31~~ 32, wherein said nuclease is selected from the group consisting of Cleavase™ BN nuclease, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

44. (Amended) A method [for treating nucleic acid comprising an oligonucleotide containing microbial gene sequences], comprising:

a) providing:

i) [a] an enzymatic cleavage means in a solution [containing] comprising manganese; and

ii) nucleic acid substrate containing microbial gene sequences;

b) treating said nucleic acid substrate with increased temperature such that said substrate is substantially single-stranded;

c) reducing said temperature under conditions such that said single-stranded substrate forms one or more cleavage structures;

d) reacting said cleavage means with said cleavage structures so that one or more cleavage products are produced; and

e) detecting said one or more cleavage products.

Please add the following new claims.

~~45.~~ The method of Claim ~~44~~, wherein said enzymatic cleavage means is a nuclease.

~~46.~~ The method of Claim ~~45~~, wherein said nuclease is selected from the group consisting of ~~Cleavase™~~ BN enzyme, *Thermus aquaticus* DNA polymerase, *Thermus thermophilus* DNA polymerase, *Escherichia coli* Exo III, and the *Saccharomyces cerevisiae* Rad1/Rad10 complex.

~~47.~~ The method of Claim ~~44~~, wherein said nucleic acid substrate comprises a nucleotide analog.

~~48.~~ The method of Claim ~~47~~, wherein said nucleotide analog is selected from the group ~~comprising~~ consisting of 7-deaza-dATP, 7-deaza-dGTP and dUTP.

~~49.~~ The method of Claim ~~44~~, wherein said nucleic acid substrate is selected from the group consisting of RNA, double stranded DNA and single stranded DNA.

~~50.~~ The method of Claim 44, wherein said microorganism comprises bacteria.

~~51.~~ The method of Claim ~~50~~, wherein said bacteria are selected from the group ~~comprising~~ consisting of members of the genera *Campylobacter, Escherichia, Mycobacterium, Salmonella, Shigella* and *Staphylococcus*.